

**Notice of Allowability**

Application No.

10/024,611

Examiner

Yubin Hung

Applicant(s)

SHIMIZU, JUNYA

Art Unit

2625

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 15 December 2004.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on 15 December 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

***Response to Amendment/Arguments***

1. This action is in response to amendment filed on Dec. 15, 2004.
2. Claims 17-20 have been added.
3. In view of Applicant's amendment, the objections to the specification and the drawings have been withdrawn.
4. In view of Applicant's amendment, the 35 USC § 112 rejection has been withdrawn.
5. Applicant's arguments (see page 10, last two paragraphs through page 11, line 5 and page 11, last paragraph through page 11, first paragraph) of the amendment filed Dec. 15, 2004, with respect to claims 1-17 have been fully considered and are persuasive. The rejections of claims 1-17 have been withdrawn.

***Allowable Subject Matter***

6. Claims 1-20 are allowed.

Art Unit: 2625

7. In addition to applicant's arguments, which have been found persuasive, the examiner further makes the following statement of reasons for allowance:

8. Regarding claim 4, prior art of record fails to teach or suggest, alone or in combination, a method for separating and extracting original signals from observed signals where multidimensional signals including the original signals are mixed, comprising, along with other limitations

- Performing separation processing on the observed signals that have undergone whitening based on a cost function having a monotonously increasing characteristic

While Hirsch (US 5,261,007) discloses a system that separates mixed signals, it does not teach the use of a monotonously increasing cost function. On the other hand, as Applicant argued, while J.-F. Cardoso and B.H. Laheld ("Equivalent Adaptive Source Separation," IEEE T. on Signal Processing, Vol. 44, No. 12, December 1996, pp. 3017-3030) teaches using an increasing cost function (Eq. 6 of page 3019) to solve the source separation problem, it is applicable only when a certain condition, namely when the sources all have a negative kurtosis, is satisfied. Success cannot be reasonably expected when employing this approach to solve the type of source separation problem that Hirsch's invention is intended for.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yubin Hung whose telephone number is (571) 272-7451. The examiner can normally be reached on 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

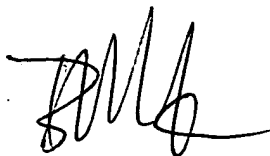
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/024,611

Page 5

Art Unit: 2625

Yubin Hung  
Patent Examiner  
April 27, 2005

A handwritten signature in black ink, appearing to read 'BMM', is written over a large, light-colored checkmark.

**BHAVESH M. MEHTA**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**